Bruhat Bangalore Mahanagara Palike
Excecutive Engineer Yelahanka Project Division

Name of Work: Providing and laying UGD pipeline and Construction of Man Holes at Hedgenagara in Ward No.06 Byatarayanapura Sub Division

							Estimate Cost Rs.		15.00 Lakhs	
SL NO	SPECIFICATION						Unit	Quantity	Rate	Amount
1	Cement concrete slab surface for pipeline trenches inside drain and disposing of the excavated stuff as directed including barricading, danger lighting etc.,									
	(BWSSB SR-2017-18/Page no.56/Sl no 16.2/Code SOR 17-18 A105B)									
	450 mm Diameter RCC NP-3 Class Sewer line									
	Stretch	No	L	B	D	Qty				
	MH1 - MH2	1	29.00	1.10	0.30	9.57				
	MH2 - MH3	1	29.30	1.10	0.30	9.67				
	MH3 - MH4	1	28.90	1.10	0.30	9.54				
	MH4 - MH5	1	29.30	1.10	0.30	9.67				
	MH5 - MH6	1	28.80	1.10	0.30	9.50				
	Add extra volume of road cutting for manholes = 0.785*2.4*2.4*0.25*5 = 5.65					**5.65**				
	Deduct for manhole trench	5	2.4	1.1	0.3	**-3.96**				
	Net Total					**49.64**	**Cum**	**49.64**	**1033.00**	**51279.153**
2	EXCAVATING FOR PIPE LINE TRENCHES OF REQIRED WIDTH by mechanical & manual means including dressing sides, ramming of bottoms, providing barricading, danger lighting, shoring,strutting, dewatering etc., IN ALL KINDS OF SOIL MIXED WITH BOULDERS 30cms size etc.,									
	0 to 2 mtr depth									
	(BWSSB SR-2017-18/Page no.51/Sl no 1.1/Code SOR 17-18 A050A)									
	450 mm Diameter RCC NP-3 Class Sewer line									
	Stretch	No	L	B	D	Qty				
	MH1 - MH2	1	29.00	1.10	1.70	54.23				
	MH2 - MH3	1	29.30	1.10	1.70	54.79				
	MH3 - MH4	1	28.90	1.10	1.70	54.04				
	MH4 - MH5	1	29.30	1.10	1.70	54.79				
	MH5 - MH6	1	28.80	1.10	1.70	53.86				
	Add extra volume of road cutting for manholes	5	2.40	1.10	2.00	26.40				
	Deduction for Qty vide no. 1a					**-49.64**				
	Net Total					**248.47**	**Cum**	**248.47**	**167.00**	**41494.49**
3	In disintegrated rock, soft rock, soft shale and medium hard rock comprising of lime stone, sand stone, hard shale, schiest, fissured rock without resorting to blasting.									
	(BWSSB SR-2017-18/Page no.51/Sl no 2.1 & 2.2/Code SOR 17-18 A055A&B)									
	15% earth work Qty i.e, Item No.2a (for 0 to 2 mtr depth)					**37.27**	**Cum**	**37.27**	**404.00**	**15057.282**
4	Hard rock by chiselling									
	(BWSSB SR-2017-18/Page no.52 & 53/Sl no 5.1 & 5.2/Code SOR 17-18 A685A&B)									
	15% earth work Qty i.e, Item No.2a (for 0 to 2 mtr depth)					**37.27**	**Cum**	**37.27**	**1487.00**	**55421.2335**
5	For bedding of sewer : KSRB 4.1 : Providing and laying in position plain cement concrete of mix M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregates @ 0.459cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted,curing complete as per specifications.									
	(PWD SR 2018-19/Page No.13/Item No.4.1)									
	450 mm Diameter RCC NP-3 Class Sewer line									
	Stretch	No	L	B	D	Qty				
	MH1 - MH2	1	29.00	0.96	0.39	10.86				
	MH2 - MH3	1	29.30	0.96	0.39	10.97				
	MH3 - MH4	1	28.90	0.96	0.39	10.82				
	MH4 - MH5	1	29.30	0.96	0.39	10.97				
	MH5 - MH6	1	28.80	0.96	0.39	10.78				
	Deduct for pipe volume 0.25*0.785*0.77*0.77* 50.58 = 5.89					-5.89				
	Deduct for manholes	5	2.40	0.96	0.39	-4.49				
	Net Total					**44.02**	**Cum**	**44.02**	**5599.98**	**246523.4502**
	A.Basic rate	**5283.00**								
	B.Area Weightage 6%	**316.98**								
	Final Rate	**5599.98**								

SL NO	SPECIFICATION	Unit	Quantity	Rate	Amount
6	Supplying of following diameters S&S RCC SPUN/VIBRATED CAST PIPES (REINFORCED) OF NP-3 class confirming to IS456-1988 with latest amendments using ordinary port land cement, conveying to work site, rolling, lowering into trenches, laying true to line and level icluding at both destinations and joining of pipes and specials including cos of specials, including perfect linking of joints with jack to correct position including cost of jointing materials i.e, ribber rings confirmng to IS:5382 for S&S RCC pipes with all leads and lifts as directed as giving necessary hydraulic tests as per ISS and testing comissioning ec., completebefore execution of the wok, contractor shall carry out the survey and will be paid extra as per the separate Item.				
	(BWSSB SR-2017-18/Page no.159/Sl no 5.5/Code SOR 17-18 T050E)				
	For 600 & 450 mm Diameter RCC NP-3 Class Sewer line				

Stretch	No	L	B	D	Qty
MH1 - MH2	1	29.00			29.00
MH2 - MH3	1	29.30			29.30
MH3 - MH4	1	28.90			28.90
MH4 - MH5	1	29.30			29.30
MH5 - MH6	1	28.80			28.80
Deduction for manholes	5	1.20			-6.00
Net Total					**139.30**

7	Construction of RCC manhole chambers of 1:1.5:3 proportion or approved type pre-cast RCC manhole chambers, constructed using form vibrators of standard type, with barricading, danger lighting and using of sight rails and boning rods wherever necessary, shoring and strutting wherever required using ordinary port land cement. Using 1:1.5:3 proportion RCC with 20mm down graded jelly. well graded sand and steel of approved quality 200mm thick top concrete slab having wall thickness and raft thickness as in approved drawings and with an offset in raft alround the chamber as in approved drawing , benching concrete with 1:6 slope towards the central drain finished smooth, inclding fixing and grouting of pipes, including conveying to work spot supply and fixing SFRC manhole cover and frame confirming to IS:12592 with latest amendments on a bed of CC 1:2:4 supplying and fixing of minimum 3mm thick encapsulated plastic footstep (as per IS:10910)on 12mm dia. Grade Fe-415 steel bar (as per IS:1786) staggerd at 300 mm apart as detailed in technical specification, including sand bedding wherever required , diposal of surplus earth, watering, curing, engraving manhole number with flow direction on the inner cylindrical surface etc., complete including cost of reinorcement steel and fabrication charges and also cost and conveyance of all materials, labur with all lead ad lifts. The precast RCC manholes are for various diameters and depths as stated below and as per detailed drawings, specifications and direction of the engineer.	**Rmt**	**139.30**	**2138.00**	**297823.4**
	(1.2 m diameter manholes) - 2 mtr depth				
	(BWSSB SR-2017-18/Page no.171/Sl no 106.5/Code SOR 17-18Tt330K)				
a	MH No. 1 to 5	**Nos**	**5**	**47373.00**	**236865**
b	For every 0.1m additional	**Nos**	**50**	**1651.50**	**82575**
8	Dismanteling the damaged or collapsed manholes of 1.2m dia conical in shape and reconstructing the same for the same dimensions with machine made wire cut brick in cm 1:4 with ordinary portland cement etc., as per design and specifications the existing rig, cover and CC bedding to be used .				
	(BWSSB SR-2017-18/Page no.180/I no 118.2)				
	1.20m dia upto 2m depth	**Nos**	**5**	**21051.00**	**105255**
9	Refilling of avilable earth around pipeline in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering all lead and lifts including cost of all labour includiong consolidation by mecanical means approved by engineer Incharge. When earth is at suitable moisture content with desired field density (modified heavy proctor test) for restoration of roads without settelment including HOM of machineries. Complete (The contractor shall take are while consolidating the earth, so that, pipes laid are not damaged due to mechanical compaction and sall restore all the damaged pipes at his own cost, in case of damage).				
	(BWSSB SR-2017-18/Page no.56/Sl no 14.1/Code SOR 17-18 A095A)				

Stretch	No	L	B	D	Qty
Total Excavation Qty					248.47
Deduction for 450mm dia pipe volume	1	145.30	0.55	0.55	-43.95
Net Total					**204.52**

10	Disposal of the excess excavated earth of all type by vehical including loading, unloading with all lead and lifts, labour, HM of machineres etc., **- for 10kms**	**Cum**	**204.52**	**103**	**21065.22525**
	(BWSSB SR-2017-18/Page no.57/Sl no 20.6/Code SOR 17-18 A115F)				

Stretch	No	L	B	D	Qty
Bedding of sewer Qty (i.e, Item No.5)					44.02
450mm dia pipe volume	1	145.30	0.75	0.75	64.16
Wet mix Macadam Qty (i.e, Item No.11)					21.17
Net Total					**129.35**

	Road Restoration	**Cum**	**129.35**	**243**	**31432.34966**

SL NO	SPECIFICATION						Unit	Quantity	Rate	Amount
11	KSRRB M400- Wet Mix Macadam KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406									
	(PWD SR 2016-17/Page No.158/Item No.20.18)									
	Stretch	No	L	B	D	Qty				
	linking 400mm dia	1.00	145.30	0.9	0.2	26.15				
	Net Total					26.15	Cum	26.15	2001.28	52341.47712
	A.Basic rate	1888.00								
	B.Area Weightage 6%	113.28								
	Final Rate	2001.28								
12	**Storm Water Restoration / Sewer Encasement**									
	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2									
	(PWD SR 2016-17/Page No.14/Item No.4.31)									
	Net Total (L/S)					15.00	Sqm	15.00	379.48	5692.2
	A.Basic rate	358.00								
	B.Area Weightage 6%	21.48								
	Final Rate	379.48								
13	KSRB 4-1.1: Providing and laying in position plain cement concrete of mix 1:2:4 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregates @ 0.459cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2									
	Bed Restoration = 50.58*1.1*0.1= 5.56					5.56				
	(PWD SR 2016-17/Page No.14/Item No.4.31)									
	Net Total (L/S)					5.56	Cum	5.56	5599.98	31157.16872
	A.Basic rate	5283.00								
	B.Area Weightage 6%	316.98								
	Final Rate	5599.98								
14	KSRB 4.2.2 : Providing and laying in position reinforced cement concrete of Design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.460 cum, with super plasticisers @ 3 liters confirming to is 9103-1999 reafirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6									
	Bed Restoration = 1145.3*1.1*0.15= 23.97					23.97				
	Lateral linking SWD restoration = 5*1*0.3=1.5					1.50				
	(PWD SR 2016-17/Page No.159/Item No.4.11)									
	Net Total					25.47	Cum	25.47	5998.54	152809.8072
	A.Basic rate	5659.00								
	B.Area Weightage 6%	339.54								
	Final Rate	5998.54								
									SUB TOTAL	1426792.24
									GST 12%	58622.89
									PMC Charges	14000.00
									Miscellaneous & Rounding off	584.87
									GRAND TOTAL	1500000.00

Assistant Engineer
Yelahanka Project Division
BBMP Bangalore

Asst. Executive Engineer
Yelahanka Project Division
BBMP Bangalore

Executive Engineer,
Yelahanka Project Division
BBMP Bangalore
20/01/2020

Administrative Approval
Accorded For Rs.15.00 lakhs only
Head of A/C P-3295
CER NO :103 Dt:20.01.2020

TA

CE (YNK)

Technical Sanction
Accorded For Rs.15.00 lakhs only
Head of A/C P-3295
CER NO :21 Dt:20/01/2020

E.E. (Project)
20/01